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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,823	03/29/2004	Jang Hui Cho	1740-000070/US/COA	1001
30593 7590 01/29/2007 HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			EXAMINER SHIBRU, HELEN	
			ART UNIT 2621	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/810,823	CHO ET AL.	
	Examiner	Art Unit	
	HELEN SHIBRU	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,9, 11 and 14-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,11 and 14-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/05, 09/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendments filed on 12/05/2006 have been entered and made of record. Claims 1-4, 9, 11, 14-38 are pending and claims 5-8, 10, and 12-13 are cancelled.

Response to Arguments

2. Applicant's arguments filed 12/05/2006 have been fully considered but they are not persuasive.

In response to Applicant's argument that the cited reference of Okada fails to disclose, teach or suggest "a first navigation unit, the first navigation unit including one or more second navigation units ..., at least one second navigation unit referencing more than one third navigation unit, each third navigation unit indicating a separate file of video data in the data area to reproduce," the Examiner respectfully disagrees.

Okada discloses the state transition of the list storing the stream management/navigation table and empty zone management/navigation table as shown in fig. 44. Fig. 41-44 shows various data lists to locate the digitally recorded video for reproduction. Figure 42 shows an example of the configuration of a table 130 for management of an empty area of each zone on the disk 110. Each zones contains information indicating an empty area in each zone and information indicating full area to which data has been recorded. See also paragraph 0314. The MPU receives a read/write instruction input through the line 54, and determines the access execution order and read/write position of the disk based on the disk scheduling algorithm. See paragraph 0170. The read/write process performed on each channel is scheduled in order from the earliest deadline. See paragraph 0191. Data are recorded in zones 1 and 6 simultaneously

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through channel 2 and channel 1. See paragraph 0296. If it is an instruction to record data through two channels, then data is alternately recorded in an inner zone through one channel and in an outer zone through other channel. See paragraph 0303. The table 120 comprises m streams 1-m. The stream i refers to the information about the stream data of i channel(s). Each stream has a data structure and the amount of data recorded at serial address is linked in a list structure. See paragraph 0313.

The claimed invention does in fact read on the cited references for at least the reasons discussed above and as stated in the detail Office Action as follows.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 9, 11, and 14-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Okada (US PG PUB 2002/0046328).

Regarding claim 1, Okada discloses a recording medium having a data structure for managing reproduction of at least video data representing multiple reproduction paths, comprising:

a data area storing at least video data as a transport stream in more than one file, each file associated with a different one of the multiple reproduction paths, and the files being interleaved

with one another (see page 2 paragraphs 0034-0037, page 8 paragraph 0175, paragraph 0193 and 0234, and figures 4, 26, and 29); and

a navigation area storing a first navigation unit, the first navigation unit including one or more second navigation units and controlling a reproduction order of the second navigation units, at least one second navigation unit referencing more than one third navigation unit, each third navigation unit indicating a separate file of video data in the data area to reproduce (see figures 42-44, leading address, amount of data, and next storage address).

Regarding claim 2, limitation of claim 2 can be found in claim 1 above. Therefore claim 2 is analyzed and rejected for the same reason as discussed in claim 1 above.

Regarding claim 3, Okada discloses wherein each data block represents at least an intra-coded picture of video data (see figure 12 and paragraphs 0005-0009 in page 1 and paragraph 0167 in page 8).

Regarding claim 4, Okada discloses wherein each data block represents at least one group of pictures (GOP) (see figure 4).

Claim 9 is rejected for the same reason as discussed in claim 1 and in Examiner's response above.

Regarding claim 11, Okada discloses recording medium having a data structure for managing reproduction of at least video data representing multiple reproduction paths, comprising:

a data area storing a transport stream of at least video data, the transport stream being divided into transport packets, each of the transport packets associated with one of the multiple

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reproduction paths, and the transport packets of each reproduction path being interleaved with one another (see rejection of claim 1 above); and

a navigation area including a first navigation unit including one or more second navigation units, the second navigation unit providing navigation information for reproducing each of the multiple reproduction paths and, including a multiple reproduction path indicator indicating that the second navigation unit provides navigation information for multiple reproduction paths (see rejection of claim 1 and Examiner's response above and paragraphs 0342).

Regarding claim 14, Okada discloses each reproduction path represents a digital channel (see pages 1-2).

Regarding claims 15, Okada discloses each reproduction path represents a sub-channel of an RF channel (see pages 1-2).

Regarding claims 16 and 17, limitation of claims 16 and 17 can be found in claim 1 above. Therefore claims 16 and 17 are analyzed and rejected for the same reason as discussed in claim 1 above.

Regarding claim 18, Okada discloses an apparatus for recording a data structure for managing reproduction duration at least video data representing multiple reproduction paths, comprising: a driver for driving an optical recording device to record data on the recording medium (see figure 12 which shows a driver circuit 63); a controller for controlling the driver to record a transport stream of at least video data on the recording medium, the transport stream being divided into transport packets, each of the transport packets associated with one of the multiple reproduction paths, and the transport packets of each reproduction path being

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interleaved with one another, and the controller configured to control the driver to record a first navigation unit on the recording medium, the first navigation unit including one or more second navigation units and controlling a reproduction order of the second navigation units, at least one of the second navigation units referencing more than one third navigation unit, each third navigation unit indicating a separate file of video data to reproduce (see figure 12 which shows the driver circuit controlled by the controller MPU, and rejection of claim 1).

Claim 19 is rejected for the same reason as discussed in claim 18 above.

Regarding claim 20, the limitation of claim 20 can be found in claim 1 above. Therefore claim 20 is analyzed and rejected for the same reason as discussed in claim 1.

Regarding claim 21, Okada discloses a number of the third navigation units associated with the at least one of the second navigation units is equal to a number of the multiple reproduction paths (see figures 43-44).

Regarding claim 22, Okada discloses at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths (see figures 43-44).

Claim 23 is rejected for the same reason as discussed in claim 1 above.

Claims 24, 25 and 26 are rejected for the same reason as discussed in claims 2-3, and 15 respectively above.

Claims 27-29 are rejected for the same reason as discussed in claims 2-3, and 15 respectively above.

Claims 30-32 are rejected for the same reason as discussed in claims 2-3, and 15 respectively above:

Claims 33-35 are rejected for the same reason as discussed in claims 2-3, and 15 respectively above.

Claims 36-38 are rejected for the same reason as discussed in claims 2-3, and 15 respectively above.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-4, 9, 11, 14-15, 20-22, 24, and 26 are rejected under 35 U.S.C. 101 because the claims are directed to a recording medium storing nonfunctional descriptive material.

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are neither physical “things” nor statutory processes. See, e.g. Warmerdam, 33 F. 3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory) and merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. In addition a mere arrangements or compilations of facts or data, are merely stored so as to be read or outputted by a computer without creating any functional interrelationship either as part of the stored data or as part of the computing processes performed by the computer then such descriptive material alone does not impart functionality either to the data as so structured, or to the computer, and therefore are not statutory. See MPEP 2106.IV.B.1.

Applicant states in the remarks filed on 12/15/2006 that “the it is clear that the ‘recording medium having data structure for managing...is a recording medium storing functional descriptive material.”

In response the Examiner respectfully disagrees. The recording medium can be a material that records data, like for example paper. Paper is a recording medium since data can be recorded on it. In addition the recording medium and the data structure alone cannot perform any activity. They have to accompany by a computer. Furthermore after performing steps, there is no outcome recited in the claim and therefore it is not functional.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

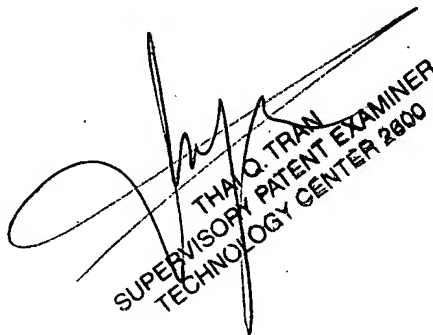
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN SHIBRU whose telephone number is (571) 272-7329. The examiner can normally be reached on M-F, 8:30AM-5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Helen Shibru
January 8, 2007


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